

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (currently amended). A method for estimating the noise appearance in an image, comprising the steps of:

a) forming a noise table representing noise magnitude vs. intensity of the image; and

b) generating a noise metric from the noise table, said noise metric representing the noise appearance in the image as seen by a human observer;

wherein the step of forming a noise table includes the steps of:

a1) forming an input noise table representing noise magnitude vs. intensity of an input image;

a2) providing an image processing chain including one or more image transforms;

a3) determining an appropriate noise transform defining the effect that each image transform will have on the noise in the image; and

a4) applying the one or more noise transforms to the input noise table to produce the noise table representing an estimate of the noise in the image; and

further comprising the steps of: forming a predetermined input noise table for a specific image capture process; using the predetermined input noise table to generate the noise metric for an image captured by the specific process.

2 (cancelled).

3 (currently amended). The method claimed in claim 2 ~~1~~, wherein one of ~~the transform steps~~ said image transforms is a digital image processing step.

4 (currently amended). The method claimed in Claim 2 1, wherein one of ~~the transform steps~~ said image transforms is an image rendering step.

5 (currently amended). The method claimed in Claim 2 1, wherein one of ~~the transform steps~~ said image transforms is human visual perception.

6-8 (cancelled).

9 (currently amended). The method claimed in Claim 1, further comprising the step of weighting the noise table by a weighting function.

10 (original). The method claimed in Claim 9, wherein the weighting function represents a histogram of the image.

11 (cancelled).

12 (original). The method claimed in Claim 1, wherein the step of generating a noise metric includes the step of locating the peak value of the noise table to obtain the noise metric.

13 (previously amended). The method claimed in Claim 12, further including the step of taking the logarithm of the peak value to obtain the noise metric.

14 (currently amended). The method claimed in Claim ~~1~~ 27, wherein the step of generating the noise metric includes the step of performing an integration or summation of the output noise table to obtain the noise metric.

15 (original). The method claimed in Claim 14, further including the step of taking the logarithm of the integration or summation to obtain the noise metric.

16 (cancelled).

17 (original). The method claimed in claim ~~16~~ 1, wherein the image capture process is a photographic process using a particular photographic film.

18 (original). The method claimed in claim ~~16~~ 1, wherein the image capture process is an image scanning process employing a particular film scanner.

19 (original). The method claimed in claim ~~16~~ 1, wherein the image capture process employs a particular digital camera.

20 (original). The method claimed in Claim 1, further comprising the step of using the noise metric to estimate the image quality.

21 (currently amended). The method claimed in Claim 4, wherein the image rendering step is any one of a photographic printing step, an ink jet printing step, a softcopy display step, a thermal printing step, an electrophotographic printing step, and a laser printing step.

22-26 (cancelled).

27 (original). The method claimed as in Claim 1, wherein the image is an output image, the noise table is an output noise table, and the noise metric is an output noise metric.

28 (previously presented). The method claimed as in Claim 1, further comprising the step of predicting the appearance of noisiness of an

image as seen by a human observer using the noise metric from the noise table.

29 (previously presented). The method claimed as in Claim 1, further comprising the step of sorting images from least to most noisy in appearance according to the noise metric.

30 (new). A method for estimating noise appearance comprising the steps of:

providing an input image captured using a specific image capture process;

forming a predetermined input noise table for said specific image capture process;

providing an image processing chain from said input image to an output image, said image processing chain including one or more image transforms; and

propagating said input noise table through one or more noise transforms corresponding to said image transforms to produce an output noise table representing an estimate of noise magnitude vs. intensity of said output image.

31 (new). The method claimed in Claim 30 wherein the image capture process is a photographic process using a particular photographic film.

32 (new). The method claimed in Claim 30 wherein the image capture process is an image scanning process employing a particular film scanner.

33 (new). The method claimed in Claim 30 wherein the image capture process employs a particular digital camera.

34 (new). The method claimed in Claim 30, further comprising the step of weighting the noise table by a weighting function.

35 (new). The method claimed in Claim 34, wherein the weighting function represents a histogram of the image.

36 (new). The method claimed in Claim 30, wherein the step of generating a noise metric includes the step of locating the peak value of the noise table to obtain the noise metric.

37 (new). The method claimed in Claim 36, further including the step of taking the logarithm of the peak value to obtain the noise metric.

38 (new) The method claimed in Claim 30, wherein the step of generating the noise metric includes the step of performing an integration or summation of the output noise table.

39 (new). The method claimed in Claim 38, further including the step of taking the logarithm of the integration or summation to obtain the noise metric.

40 (new). The method claimed as in Claim 30, further comprising the step of sorting images from least to most noisy in appearance according to the noise metric.